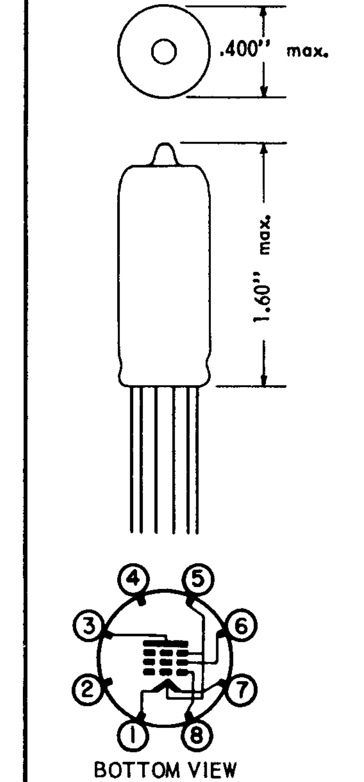


TECHNICAL INFORMATION

SUBMINIATURE POWER PENTODE

TYPE CK6397

Excellence in Electronics



The CK6397 is a filament type RF Power Pentode of subminiature construction designed for use as an intermittent duty cycle Class A or Class C amplifier such as in portable transceiver equipment or as a frequency doubler at output frequencies in the VHF Range. It is designed for dependable operation under conditions of shock and vibration usually found in mobile and aircraft applications. The flexible terminal leads may be soldered or welded directly to the terminals of circuit components without the use of sockets. Standard 8-pin subminiature sockets may be used by cutting the leads to a suitable length.

MECHANICAL DATA

ENVELOPE: T-3 Glass

BASE: Subminiature Button 8-Pin (0.017" tinned flexible leads. Length: 1.25" min.)

TERMINAL CONNECTIONS:

Lead 1	Filament, negative	Lead 6	Grid #2
Lead 2	No Connection	Lead 7	Filament, positive
Lead 3	Plate	Lead 8	Grid #1
Lead 4	No Connection		
Lead 5	Filament center-tap, Grid #3, (F+parallel)		

MOUNTING POSITION: Any

ELECTRICAL DATA

DIRECT INTERELECTRODE CAPACITANCES: (*μμfds*)

	Unshielded	Shielded	
Grid to Plate: (g1 to p)	0.06	0.055	max.
Input: g1 to (F+g2+g3)	2.6	2.75	
Output: p to (F+g2+g3)	2.15	3.0	

RATINGS - ABSOLUTE MAXIMUM VALUES:

Filament Voltage (dc)	1.25/2.5 ± 12%	volts
Plate Voltage	135	volts
Grid #2 Voltage	135	volts
Grid #1 Voltage	100	volts
Plate Dissipation	1.5	watts
Grid #2 Dissipation	0.6	watt
Cathode Current	14	ma.
Grid #1 Current	0.375	ma.
Altitude	60,000	feet
Impact	500	g

CHARACTERISTICS AND TYPICAL OPERATION - CLASS A AMPLIFIER:

Filament Voltage	1.25/2.5	volts
Filament Current	125/62.5	ma.
Plate Voltage	125	volts
Grid #2 Voltage	125	volts
Grid #1 Voltage	-7.5	volts
Plate Current	7.25	ma.
Grid #2 Current	1.2	ma.
Transconductance	1950	μmhos

CHARACTERISTICS AND TYPICAL OPERATION - FREQUENCY DOUBLER:

Filament Voltage (dc)	1.25	1.25	volts
Filament Current	125	125	ma.
DC Plate Voltage	120	120	volts
DC Grid #2 Voltage	120	120	volts
Grid Bias Resistance	0.27	0.22	meg.
Peak RF Grid Drive Voltage	65	80	volts
Plate Current	6.5	7.5	ma.
Grid #2 Current	2.0	2.50	ma.
Grid #1 Current (approx.)	220	325	μa.
Useful Power Output	115	140	mw.
Output Frequency	125	250	Mc.

Tentative Data



SUBMINIATURE POWER PENTODE

AVERAGE PLATE CHARACTERISTICS

Ec1 = 0 V

- 2.5 V

- 5.0 V

- 7.5 V

Ec1 = 0 V

- 10.0 V

- 5.0 V

- 12.5 V

Conditions:
Ef = 1.25 Vdc
Ec2 = 125 Vdc
Ic2 — — — —
Ib ————

Plate or Grid #2 Current - Ma.

0 4 8 12 16 20 24 28

0 20 40 60 80 100 120 140 160 180

Plate Voltage - Volts



SUBMINIATURE POWER PENTODE

AVERAGE PLATE CHARACTERISTICS
(Triode Connected)

Conditions:
Ef = 1.25 Vdc

E_{c1} = 0 V
-2.0
-4.0
-6.0
-8.0
-10.0

Plate Voltage - Volts
0 25 50 75 100 125 150

Plate Current (mAdc)
0 5 10 15 20 25

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RECEIVING AND CATHODE RAY TUBE OPERATIONS

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